

Optimizing the institutional role of community forest farmers groups in Basokan Village, Nanggala District, North Toraja Regency

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Optimizing the institutional role of community forest farmers groups in Basokan Village, Nanggala District, North Toraja Regency

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Abstract. Community involvement in forest management through community forest schemes is an integration of community participation for their social, economic and institutional strengthening without overriding aspects of the environment. This study aims to analyze the institutional conditions of the farmer group and the problems faced, and develop strategies in optimizing the role of forest farmer groups to encourage sustainable management. This research was conducted in March - May 2021 in the Community Forest in Basokan Village, Nanggala District, North Toraja Regency. Respondent research is determined purposive sampling-based variables that have been determined. Data analysis used in this study are descriptive qualitative analysis to assess the condition of farmer group institutions, and use Fishbone Analysis and Gap Analysis to assess the problems that occur as variables in developing strategies in optimizing the role of Community Forest farmer groups. The results of the study found that the role of farmer group institutions was still low by looking at institutional elements including the provision of input and capital of low capital, the fulfillment of labor is limited, the absence of farmers developed together, processing of agricultural products was not carried out, limited market access by farmer groups, and access to limited information. Furthermore, the strategy compiled to optimize the role of farmer groups service is to facilitate access to farmer groups to financial institutions to obtain capital inputs and production inputs in order to develop business units that will be managed together, human resource and institutional development through mentoring and coaching programs such as capacity building in management Business, organizational management, production processing training is a product that is high economic value, and marketing training, and creates a healthy and sustainable marketing system to encourage the development of business units managed by forest farmer groups.

1. Introduction

Natural resources in the form of land is a potential natural wealth that has a capacity that does not increase. This becomes a problem with the increasing number of residents which indicates the higher demand for land. This is also exacerbated by the rapid development of an area. Indonesia's land area is ±187,918.3 million ha, of which 51.53% is forested area (Ministry of Environment and Forestry Statistics, 2017). This then encourages people to use land in forest areas. The utilization process carried out in the forest area is often found to be used illegally and no longer in accordance with the function of the area, such as; settlements as well as agricultural and cultivating activities. It is no longer paying



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attention the importance of the existence of forests and land uses that are not in accordance with their carrying capacity.

One of the government programs in forestry development is to involve the community with a social forestry scheme which has been promoted based on the Minister of Environment and Forestry Regulation Number 83 of 2016. The central government in 2017 - 2020 is targeting 12.7 million ha of forest area for social forestry (Ministry of Environment and Forestry, 2017). Some experts also admit that forest communities are able to protect critical land through conservation efforts [1]. According to Kartasmita (1997), the lack of community participation is a factor causing the failure in national development, especially forestry development [2].

The implementation of a Community Forest in a protected forest area of ± 4,380 ha in North Toraja Regency is determined based on a decree. Minister Number. SK.628/Menhut-II/2010 (Ministry of Forestry, 2010), on Basokan Village. Community involvement in forest management through the Community Forest scheme is an integration of community participation for their social, economic and institutional strengthening without neglecting environmental aspects. Community forestry programs are rare in reducing deforestation by involving communities in and around forests [3].

Strengthening the implementation of community forestry is carried out by strengthening group institutions that have obtained management permits. According to Larasati (2021), farmer group institutions have a role to regulate community activities both individually and in groups in managing community forest areas [4]. Institutional farmer groups have a role in regulating natural resource management [5]. In addition, according to Aminah (2018), the activeness of farmer group institution has an impact on a positive tendency towards dynamic farmer group institutions [6]. Therefore, this research is important to do by analyzing the institutional conditions of farmer groups which are used as variables in formulating strategies in optimizing the institutional role of community forest farmer groups in Basokan Village, Nanggala District, North Toraja Regency which has been managed from 2010 until now.

2. Research method

2.1. Time and place

This research was conducted for three months starting from March – May 2021. This research was conducted in the Community Forest Area in Basokan Village, Nanggala District, North Toraja Regency.

2.2. Data collection technique

The data collection techniques used in this study consisted of:

- a. Observations and in-depth interviews with respondents to analyze the institutional conditions of Community Forest farmer groups in the research location. This is done to obtain information related to farmer group institutions including the provision of inputs and capital, fulfillment of labor, land conditions and components, farming, processing of agricultural products, marketing of products, and providing information, as well as problems in Community Forest management.
- b. Literature study by collecting secondary data that can support the completion of research results, citing and studying reports related to research, and recording data obtained from the Central of Statistics in North Toraja Regency in the form of area data and demographic data.

2.3. Data analysis

- a. Analyzing the institutional conditions of forest farmer groups, namely a qualitative descriptive analysis that produces descriptive data that is described from the results of observations and in-depth interviews. This analysis describes a condition of the observed object of research. Through a qualitative descriptive approach, researchers will describe the object that is observed factually and systematically.
- b. Develop a strategy to optimize the role of forest farmer groups in forest community management by identifying problems that hinder land management. This stage is done by using fishbone

diagram analysis. Fishbone diagram will show the overall condition and root cause of an activity.

- c. Analyzing the gaps that occur between conditions that occur in the field with ideal conditions/expected conditions by using gap analysis to be used as variables in formulating strategies to optimize the role of forest farmer groups.

3. Result and discussion

3.1. Farmer group institutional condition

3.1.1. Provision of inputs and capital. Production facilities (inputs) are used to increase the accessibility of farmers to obtain the needs for production [7]. The results of the study found that the productivity of forest farmer group commodities was still relatively low due to limited capital to provide production inputs. Fatih Research (2002); Fitriani and Sutarni (2011) suggest that lack of capital and access to technology has an impact on low agricultural productivity and uncompetitive products [8,9]. This indicates that the provision of inputs and capital greatly affects the development of forest farmer groups farming. Interview results in the field found that the Bendang Dirennuang farmer group had submitted a proposal for equipment assistance to the government but it has not been approved so far. However, in the annual work plan it has included the provision of facilities and infrastructure to facilitate production such as the construction of production roads and the provision of agricultural tools such as spray tanks, mini chainsaws, lawn machines, and carts. In this plan, capital provision is expected from self-help (former group contributions), the government, as well as aid funds from other parties. The absence of economic institutions such as cooperatives is also one of the obstacles to the availability of capital for forest farmer group.

3.1.2. Labor fulfillment. The results of field interviews found that forest farmer group members involved all family members in carrying out land management activities, starting from planting, maintaining, harvesting, and marketing the produce. Group members as a whole do not use the services of paid laborers in all activities carried out in the management of community forest.

In general, planting, maintenance, and harvesting activities are carried out by male family members, while post-harvest activities are carried out by women. However, sometimes in the harvesting process, such as harvesting coffee and cocoa, and picking chilies, it is done by women. The marketing of products in large quantities is done by men, while if the products are produced in small quantities it is done by women.

3.1.3. Land condition. The condition of the land in the community forest area is a mixed crop consisting of forestry plants and agricultural crops which are managed through an agroforestry. The most dominant types of forestry plants are the types of buangin tree's and pine combined with annual crops such as coffee, cloves, cocoa, and seasonal crops such as chili and ginger. The community forest area is located in a protected forest which is a highland. Topographic conditions vary from flat, sloping, hilly, and steep.

3.1.4. Farming. In general, forest farmer groups have a business management plan for the NTFP commodity honey, planting MPTS plants whose fruit can be harvested through an agroforestry system with coffee plants, as well as planting forage fodder [10]. The plan for the development of planting MPTS plants in the form of plants of durian, breadfruit, mangos teen, and nutmeg. In the community forest program, MPTS plants are woody plants that can be used by the community without cutting the wood in order to improve welfare [3]. MTPS plants commonly used by the community are plants that are suitable for planting locations, has a high economic value, available marketing, and can be harvested the fruit/products without cutting the wood [11].

Farmer group business management through the development of NTFPs for honey is planned through a beekeeping program by providing column and colonies. In addition, beekeeping training has been carried out by members of a farmer group in Basokan District at Misakada groups whose members are women's groups. Improving business management through the use of NTFPs by farmer groups has an

impact on increasing people's income [12]. In addition, the use of NTFPs by farmer groups has a good impact on the ecological aspect. Exploitation of NTFPs is less destructive than timber harvesting, thus having an impact on forest sustainability [13].

All farms are sold in their original form. The lack of knowledge and capital of farmer group members causes them not to manage their harvests into products of high economic value [14]. In addition, Nandini's research (2013) states that improving products resulting from forest management needs to involve relevant agencies such as the industry office and business cooperatives in order to provide entrepreneurship training [15].

3.1.5. Agricultural product processing. Agricultural products managed by the forest farmer group in Basokan district consist of coffee, cocoa, cloves, chilies, and ginger. However, coffee is a dominant agricultural commodity managed by the community. Research by Saragih (2017) states that the integration of coffee plants (agricultural sector) and cover crops (forestry sector) can increase coffee production in rural areas both economically, socially, and ecologically [16]. The development of agricultural crops is able to boost the income of forest farmer groups. Hermawan (2012) found that the agricultural sector remains the leading sector to reduce poverty in the aggregate which is usually synonymous with rural communities [17].

The harvested commodities of coffee, cloves, cocoa, chili, and ginger are sold in raw form without any processing into post-harvest finished products. Coffee and cocoa are sold in dry form and have been dried by farmer groups, while ginger and chili are sold directly after being picked by the community. The lack of training and assistance for forest farmer groups related to the processing of production products into products with high economic value is one of the causes of the non-optimal management of community forest as an effort to improve the welfare of communities around the forest.

3.1.6. Results marketing. The commodities obtained by the community from the management of community forest are marketed by members of the farmer groups consisting of coffee, cocoa, chili, honey, palm sugar, ginger, cloves, and bamboo. Some commodities are used for household needs and sold (marketed) by farmers to increase family income. The marketing chain of farmer groups for each commodity is different. Coffee, cocoa, and clove commodities are marketed by the community through two market chains, namely farmers selling to middlemen who come directly to the village or farmers directly selling their products to the market. For honey commodity, the buyer goes directly to the farmer's house to buy honey, which is sold in the farmer's simple stall which is stored in front of their house, while for the bamboo commodity, the buyer directly conducts the transaction in the farmer's garden. This is also supported by research by Sanjaya (2017) which found that farmers use the shortest marketing network to market non-timber forest products because selling to the market requires a vehicle to transport their produce [18]. Furthermore, for the commodities of Ginger and Chili, farmers directly sell them to the market. In terms of payment methods, farmers transact directly in cash.

3.1.7. Information provision. The existence of access to information by the community in the management is carried out through farmer group assistants both from NGOs and from relevant government agencies. Community forest management is accompanied by community forest assistants from the Center for Social Forestry and Environmental Partnerships. In addition, members of the farmer groups were also accompanied by WALDA (local NGOs) who became community facilitators starting from proposing forest community management in the research villages.

The community understands that the program is a legal access given to them to manage state forest areas as a source of family economy. The results of the study found that members of the farmer group knew all the rules of the game in community forest management in their areas located in protected forest areas. The head of the farmer group also has an important role in conveying all forms of information needed in the management of community forest such as group member activities which include community forest management planning, training activities and mentoring in order to increase capacity, and meetings of forest farmer group members.

3.2. *Optimizing the role of forest farmer groups in community forest management*

3.2.1. *Problems in community forest management.* The results of the analysis on the institutional conditions of farmer groups show problems in the forest farmer group institution, namely the lack of capital input and production inputs for farmers so that the productivity of farmers' community forest management results is low which has an impact on the income earned by the community. In addition, there is no farming business developed by forest farmer group. The results of the interviews conducted found that the lack of mentoring and entrepreneurship training in farming business development was one of the factors that led to the absence of farming businesses developed by farmer group.

The problem that exists in one of the institutional elements of forest farmer group is the availability of information for them. As a society that has limited access to information through communication media, access to information can only be obtained from farmer group facilitators, both from NGOs and related government agencies, so that limited access to information is one of the problems in the forest farmer group of community forest management.

After analyzing the problems obtained from the analysis of the institutional conditions of forest farmer group, it can be concluded that the variables in the institutional aspect have a relationship with each other that cannot be ignored in optimizing the role of farmer group in community forest management. Furthermore, to find the main problems of farmer group institutions in community management, it is carried out fishbone analysis by first categorizing the main causes and the root of the problem. The categorization used consists of human resources, technology, processes, and the environment. The category describes farmers' problems in community forest management and their root causes, the technology category describes problems in the application of equipment/ technology in forest management, the method category describes problems in the production process carried out by farmers, and the environmental category describes problems in forest management that have an impact on the environment. The detailed fishbone diagram is presented in Figure 1.

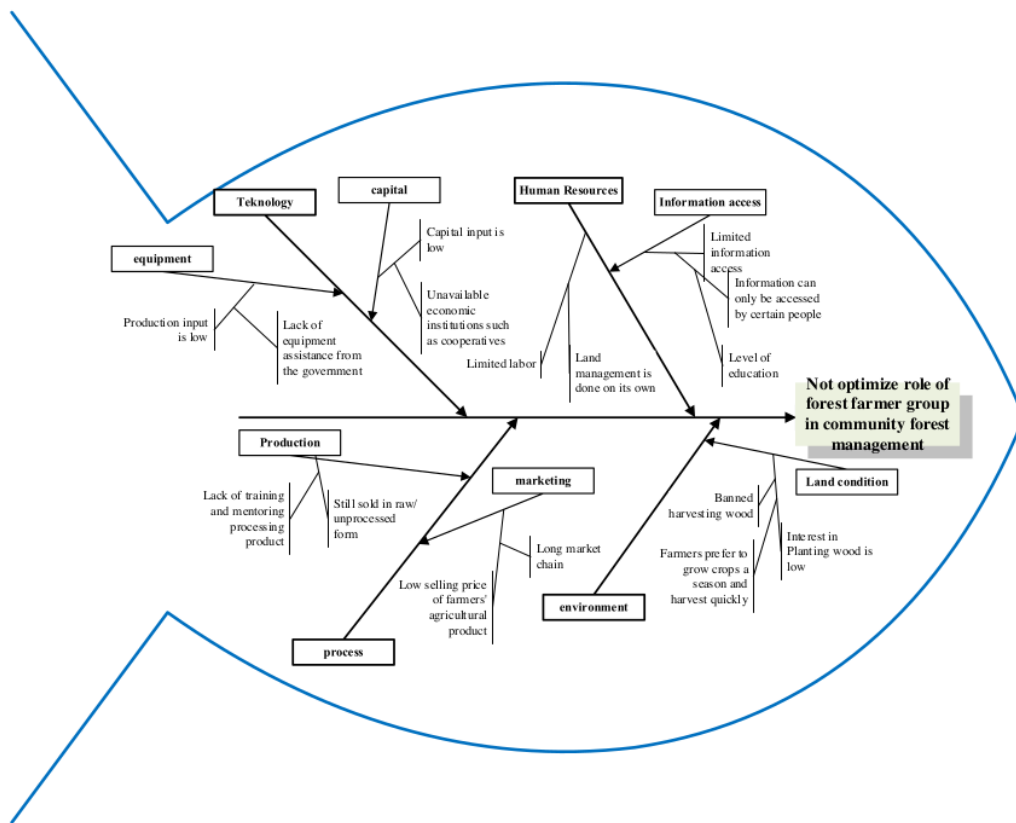


Figure 1. Fishbone analysis

After analyzing the problems using fishbone diagrams, the main problems in the management of community forest from the institutional aspects of farmer groups are obtained which are described in the following table 1.

Table 1. Main problems in community forest management	
Condition	Main Problem
Provision product input and capital input	1. Low production input for farmers 2. Unavailability and limited access of forest farmer group to economic institutions
Labor fulfillment	1. Limited labor 2. Limited information access
Production and marketing	1. Production results are still sold in the form of raw materials so that the selling price is low 2. There is no farming business by farmer group develop together 3. Long market chain
Environment	Less interest planting wood by farmer

After analyzing the problem using fishbone analysis, then a gap analysis is carried out (gap analysis) for develop alternative strategies that can be carried out and are recommended to optimize the role of farmer group institutions in Community Forest management. The gap analysis is carried out by comparing the conditions that occur in the field, the expected conditions, and the gaps that occur. The following table of the gap analysis that has been carried out is described in Table 2.

Table 2. Gap analysis in optimization role of forest farmer groups

Present Condition	Expected Condition	Gap
Product input and capital input is low for farmer group	Product input and capital input is high for farmer group	<ul style="list-style-type: none"> • There is no business to develop by forest farmer group • Production results are still sold in the form of raw materials so that the selling price is low
Limited access information and access the market by farmer group	Farmer group can access the market and convenience access the information	<ul style="list-style-type: none"> • Long market chain • Limited access the knowledge facilities by farmer group

Cause-and-effect analysis and gap analysis are conducted to assist in formulating solutions to problems that occur in optimizing the role of farmer group in community forest management in the field. The results of the analysis show that the conditions that occur in forest farmer group institutions in all aspects studied are related to each other and influence each other. The role of the institution currently depends on the extent to which capital inputs and production inputs are used for group in developing community forest management, such as processing production products and developing business units. In addition, the marketing of produce is closely related to access to information and access to knowledge by farmers which will have an impact on increasing the income that can be obtained by them in community forest management.

The results of the analysis carried out are then used as variables in formulating strategies to optimize the role of institutions in community forest management in the study area, which are as follows.

- a. Facilitate access for farmer group to financial institutions to obtain capital inputs and production inputs in order to develop business units that will be managed together
- b. Human resource and institutional development through mentoring and coaching programs such as capacity building in business management, organizational management, training on processing production into products of high economic value, and marketing training
- c. Creating a healthy and sustainable marketing system to encourage the development of business units managed by forest farmer group.

4. Conclusion

Institutional conditions indicate that the role of institutions in the management of community forest is still low, which is indicated by the absence of capital and production inputs, the absence of business units developed by forest farmer group, and the absence of a good marketing system by farmer group.

Strategy in optimizing the role of forest farmer group, namely by facilitating access for farmer group to financial institutions to obtain capital inputs and production inputs in order to develop business units that will be managed jointly, human and institutional development through mentoring and coaching programs such as capacity building in business management, organizational management, training on processing production into products of high economic value, and marketing training, as well as creating a healthy and sustainable marketing system to encourage the development of business units managed by forest farmer group.

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PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9
